Contains No CBI Contains No CBI

PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA 74004 918 661-6600

HEALTH, ENVIRONMENT AND SAFETY

"Contains No CBI"

August 24, 1992

Compliance Audit Program
CAP ID#: 8ECAP-0075

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CERTIFIED MAIL - RETURN RECEIPT

8EHQ-92-12574
8892000107 58
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Document Processing Center (TS-790)
Office of Pollution Prevention and Toxics
Environmental Protection Agency
401 M Street, SW
Washington, D. C. 20460

Attn: Section 8(e) Coordinator
(CAP Agreement)

Gentlemen:

Phillips Petroleum Company is submitting the enclosed sixty (60) reports (two boxes, numbered 1 and 2) of toxicological studies pursuant to catagory II.B.2.b of the CAP Agreement 8ECAP-0075 Reports. Reports being submitted contain no confidential business information.

We are sending an additional five boxes (box numbers 3-7) of reports of studies that have, previously, been submitted to the FYI coordinator of the Office of Pollution Prevention and Toxics by the American Petroleum Institute (API). These are being provided solely for the Agency's convenience.

For questions concerning this correspondence, plese contact Fred Marashi at 918-661-8153.

Very truly yours,

Barbara J. Price
Vice President
Health, Environment & Safety

Enclosure (Seven Boxes)

FFM/dh:29

RECEIVED 3/7/95

Title of Study: Acute Toxicity Tests #6 Heavy Fuel Oil (API Gravity 11.7/2.7% S)

Name of Chemical: #6 Heavy Fuel Oil (API Gravity 11.7/s.7% S)

CAS#: 68553-00-4

Summary: The subacute dermal toxicity of API 78-6, #6 Heavy Fuel Oil (API Gravity 11.7/2.7%S), resulted in dermal irritation and hepatic toxicity at 8 ml/kg in all animals.

The dermal LD_{50} for the test material is greater than 8 ml/kg.

Fiche # 1677

Contact:

Fred Marashi
Phillips Petroleum Company
13 D2 PB
Bartlesville, OK 74004
Phone: 918/661-8153
Fax: 918/661-5664

Subacute Dermal Toxicity

API 79-

#6 Heavy Fuel Oil (API Gravity 11.7, 2.7 SS)

Conducted By:

Elars Bioresearch Laboratories, Inc.
225 Commerce Drive
Fort Collins, Colorado 80524

Dates of Study:

May 21, 1979 - January 21, 1980

Report To:

American Petroleum Institute
2101 L Street Northwest
Washington, D.C. 20037

Vicki J. Mills, B.S.
Toxicology Technician
Study Coordinator

L. Steven Beck, D.V.M., M.S.
Assistant Director of Toxicology
Study Director

William H. Halliwell, D.V.M., Ph.D.
Pathologist

Douglas I. Hepler, Ph.D.
Vice President, Toxicity
Evaluation Division

REVIEWED BY QUALITY ASSURANCE: [illegible]

Westpath Laboratories, Inc.
Project Number 1014
June 23, 1980

Pharmaceutical Research Laboratories
Project Number 1443-F
API 78-6

QUALITY ASSURANCE STATEMENT

A quality assurance inspection was made of 20% of the data in this report and included inspection of pathologist's dictation to individual animal histopathology forms and review of tabular summaries.

Linda K. Hatler, B.S.
Quality Assurance

June 24, 1980
Date

Subacute Dermal Toxicity
API 78-6
#6 Heavy Fuel Oil (API Gravity 11.7/2.7%S)

OBJECTIVE:

The study described herein was conducted to evaluate the dermal toxicity of the test material when applied in repeated doses over a period of two weeks.

MATERIALS AND METHODS:

1. Test Material:

The test material, a liquid in a metal container identified as API 78-6, #6 Heavy Fuel Oil (API Gravity 11.7/2.7%S), was received by Elars on October 8, 1979. The concentration, purity, and stability were not provided by the sponsor. The test material was stored in Elars test material storage room.

2. Animals:

The treatment group and the control group each consisted of eight adult New Zealand White rabbits, four males and four females, weighing between 2 and 4 kg. The rabbits were purchased from Dutchland Rabbitry, Denver, Pennsylvania, and Pel-Freez Farms, Rogers, Arkansas, and were identified individually by metal ear tags and corresponding cage tags. The rabbits were allowed to acclimate at Elars at least one week. Purina Rabbit Chow® and fresh water were provided ad libitum. Throughout acclimation and testing, the rabbits were housed individually in standard laboratory rabbit cages.

3. Method:

Prior to application of test material, the rabbits were shaved free of hair with a number 40 Oster® clipper blade. The shaved area on each animal constituted about 10 percent of the total body surface area.

The daily dosage used for this compound was 8 ml/kg body weight, and an untreated control group. The rabbits were exposed to the test material for five consecutive days followed by a two day rest period and then again for five consecutive days. The test material was applied to four-inch square gauze sponges backed by plastic wrap. The sponges and plastic wrap were taped to the shaved area of the animals' backs with porous adhesive tape. The entire trunk of each rabbit was wrapped with elastic tape to prevent slippage of the patches. The rabbits remained bandaged for 24 hours, at which time the patches were removed and a new dose of test material was applied. This procedure was followed each day of the five day dosing period. During the two day rest period the animals were not dosed.

Observations for mortality, local reactions, and behavioral abnormalities were made daily during the 14 day period. Initial and final body weights were recorded.

Any animals which succumbed during the study as well as those killed with T-61® at the termination of the study were subjected to necropsy, and all significant gross pathological alterations were recorded. In addition, the following tissues were submitted for histopathologic examination: skin from the test site, liver, kidney, spleen and urinary bladder.

The collected tissues were fixed in 10% neutral buffered formalin. Afterwards, the tissues were trimmed, embedded in paraffin, sectioned at 4 to 6 microns, affixed to glass slides, and stained with hematoxylin and eosin. Histopathologic examination of the submitted tissues was conducted at Westnath Laboratories by William H. Halliwell, D.V.M., Ph.D., Diplomate ACVP.

RESULTS:

Individual animal weights and doses are given in Tables 1 and 2 for the 8 ml/kg dosage level and the control, respectively. During the dosing period the test material spread from the test site to cover most of the rabbit. Observation of the test sites was difficult due to the dark color of the test material, but the test sites appeared reddened and slightly edematous during the course of the study. Three animals died while on test. Necropsy of the animals that died and the animals sacrificed at day 14 showed liver damage in all animals. In addition, one animal had inflammation of the intestines, and one animal had multifocal areas of ulceration in the stomach.

The histopathologic observations of selected tissues from rabbits exposed daily to 8 ml/kg of test material API 78-6 and from untreated control rabbits are presented in accompanying Tables 3 and 4, respectively. The test material produced acanthosis, acute inflammation, chronic inflammation, crusting, dermal congestion, dermal edema, hyperkeratosis, epidermal necrolysis, and parakeratosis in the treated group. The severity of these cutaneous lesions varied from very slight to moderate at all test sites.

The multifocal necrosis noted in livers of five out of eight rabbits in the 8 ml/kg group varied in degree of insult from moderate to severe.

CONCLUSIONS:

The test material, API [illegible], [illegible] (LD50 11.7/12.7"S), resulted in [illegible] observation period and at necropsy in the species examined.

The histopathologic observations of animals exposed to the 3 ml/kg dose of the test material (API 78-6) revealed evidence of dermal irritation and hepatic toxicity at that dosage level.

The dermal LD_{50} for the test material is greater than 3 ml/kg.

PERSONNEL:

Personnel responsible for the collection and interpretation of data generated in the course of this study were Vicki J. Mills, B.S., Toxicology Technician, Study Coordinator; L. Steven Beck, D.V.M., M.S., Assistant Director of Toxicology, Study Director; Denice E. Morita, B.S., and Irma Albinana, Toxicology Technicians; Douglas I. Hepler, Ph.D., Director of Toxicology; and William H. Halliwell, D.V.M., Ph.D., Pathologist.

RAW DATA:

Raw data regarding this study are to be found in Elars' notebooks #239 and #1505 in file #1443-F.

Table 1

Individual Animal Weights and Dosages
Dosage Level 8 ml/kg, 38% Mortality

January 7, 1980

Animal Number	Sex	Body Wt. Day 0 (kg)	Dose (ml)	Body Wt. Terminal	Weight Gain (kg)	Termination Day
841	M	2.8	22.4	2.3	-0.5	14
843	M	3.1	24.8	2.7	-0.4	9
845	M	3.1	24.8	2.4	-0.7	9
847	M	2.8	22.4	2.3	-0.5	9
830	F	3.1	24.8	2.0	-1.1	14
832	F	2.8	22.4	2.7	-0.1	14
834	F	2.7	21.6	2.2	-0.5	14
836	F	3.2	25.6	2.4	-0.8	14

Table 2

Individual Animal Weights and Dosages
Dosage Level 0 ml/kg, 0% Mortality

May 21, 1979

Animal Number	Sex	Body Wt. Day 0 (kg)	Dose (ml)	Body Wt. Terminal	Weight Gain (kg)	Termination Day
421	M	2.4	—	2.5	0.1	14
423	M	2.3	—	2.7	0.4	14
425	M	2.4	—	2.5	0.1	14
427	M	2.5	—	2.7	0.2	14
422	F	2.7	—	2.9	0.2	14
424	F	2.7	—	3.0	0.3	14
426	F	2.7	—	2.9	0.2	14
428	F	2.4	—	2.5	0.1	14

INDIVIDUAL HISTOLOGIC OBSERVATIONS

0 ml/kg/day

Accession Number (80-)	551	552	555	556	550	553	554	557
Animal Number	847	841	843	845	836	839	835	834
Sex	M	M	M	M	F	F	F	F
Reason Discontinued	DOT	FS	DOT	DOT	FS	FS	FS	FS
Days on Test	9	14	9	9	14	14	14	14
LIVER								
Abscess, focal								
Congested							2	
Mineralization								
Necrosis, multifocal	4	3	4	4	4			
Pericholangitis	2	2	2	2		2	1	1
Vacuolar Degeneration, centrilobular	3	2	3	2	3	1	2	1
KIDNEY			NR			NR		
Congested	2	1		1	1		2	1
Mineralization, focal								
Mononuclear Cell Infiltrate, focal								
Mononuclear Cell Infiltrate, diffuse								
Nephrosis, tubular								
SPLEEN		NR		NR	NR	NR	NR	NR
Congested			2					
Hyperplasia, reactive	3		2					
URINARY BLADDER	NR	NR	NR	NR	NR	NR	NR	NR
SKIN (Test Site)								
Acanthosis	2	3	2		3		1	1
Acute Inflammation					1	1		
Chronic Inflammation	1	1	2	1	1	2	1	
Crusting	1							
Deep Pyoderma								
Dermal Congestion	2				1	1	1	1
Dermal Edema		1	2		1			
Epidermal Microabscesses, multifocal								
Hyperkeratosis	2	1	2	1	2	3	2	1
Liquefactive Degeneration								
Necrolysis, epidermal						1	2	
Parakeratosis			1	1		2	2	1
OTHER LESIONS								
LUNG								
Atelectasis								
Hemorrhage, interalveolar								
STOMACH								
Congestion, mucosal								
Lymphoid Hyperplasia, submucosal								
Necrosis, mucosal								

KEY: Acc = Accidental Death
DOT = Died on Test
FS = Final Sacrifice
MS = Moribund Sacrifice
SS = Scheduled Sacrifice
NDT = Tissue Present, No Diagnosis Tendered

TNP = Tissue Not Present
NR = Tissue Present, Not Remarkable
AUT = Autolysis
O-NR = Paired Organ, Unilateral Absence, Tissue Present, Not Remarkable
O- = Unilateral Lesion

Severity
1 = Very Slight
2 = Slight or Small
3 = Moderate
4 = Severe

INDIVIDUAL HISTOLOGIC OBSERVATIONS

Control

Accession Number	N225	N226	N227	N228	N229	N230	N231	N232
Animal Number	421	422	423	424	425	426	427	428
Sex	M	F	M	F	M	F	M	F
Reason Discontinued	FS	FS	FS	FS	FS	FS	FS	FS
Days on Test	14	14	1	14	14	14	14	14
LIVER			NR		NR	NR		
Abscess, focal				4			4	
Congested								
Mineralization								
Necrosis, multifocal								
Pericholangitis	1	3						1
Vacuolar Degeneration, centrilobular	3							
KIDNEY	NR	NR	NR	NR	NR	NR	NR	NR
Congested								
Mineralization, focal								
Mononuclear Cell Infiltrate, focal								
Mononuclear Cell Infiltrate, diffuse								
Nephrosis, tubular								
SPLEEN			NR		NR	NR		NR
Congested							3	
Hyperplasia, reactive	2	1		2			2	
URINARY BLADDER	NR	NR	NR	NR	NR	NR	NR	NR
SKIN (Test Site)	NR	NR	NR	NR	NR	NR	NR	NR
Acanthosis								
Acute Inflammation								
Chronic Inflammation								
Crusting								
Deep Pyoderma								
Dermal Congestion								
Dermal Edema								
Epidermal Microabscesses, multifocal								
Hyperkeratosis								
Liquefactive Degeneration								
Necrolysis, epidermal								
Parakeratosis								
OTHER LESIONS								
LUNG	TNP	TNP	TNP	TNP	TNP	TNP	TNP	TNP
Atelectasis								
STOMACH	NR	NR	NR		NR	NR	NR	NR
Congestion, mucosal								
Lymphoid Hyperplasia, submucosal				2				

KEY: Acc = Accidental Death
DOT = Died on Test
FS = Final Sacrifice
MS = Moribund Sacrifice
SS = Scheduled Sacrifice
NDT = Tissue Present, No Diagnosis Tendered

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O- = Unilateral Lesion

Severity

1 = Very Slight
2 = Slight
3 = Moderate
4 = Severe

Analysis of Feed

The guaranteed analyses of feed for Purina Guinea Pig Chow®, Purina Formulab Chow®, and Purina Rabbit Chow®, as provided on the manufacturer's labels, are listed below. No additional analyses of feed were made.

Guaranteed Analysis of Feed

	Type of Purina® Chow		
Nutritional Content	Purina Guinea Pig Chow® 5025 (%)	Purina Formulab Chow® 5008 (%)	Purina Rabbit Chow, Checkers® 5301 (%)
Crude protein, minimum	18.0	23.0	16.0
Crude fat, minimum	4.0	6.5	2.0
Crude fiber, maximum	16.0	4.0	18.0
Ash, maximum	9.0	8.0	9.0
Added minerals, maximum	3.5	2.5	3.0

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Barbara J. Price
Vice President
Health, Environment & Safety
Phillips Petroleum Company
Bartlesville, Oklahoma 74004

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

MAY 0 8 1995

EPA acknowledges the receipt of information submitted by your organization under Section 8(e) of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA §8(e) Document Control Number (e.g., 8EHQ-00-0000) assigned by EPA to your submission(s). Please cite the assigned 8(e) number when submitting follow-up or supplemental information and **refer to the reverse side of this page for "EPA Information Requests"** .

All TSCA 8(e) submissions are placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA §8(e) policy statement (43 FR 11110, March 16, 1978). Confidential submissions received pursuant to the TSCA §8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims. This information is required and should be submitted if not done so previously. To substantiate claims, submit responses to the questions in the enclosure "Support Information for Confidentiality Claims". This same enclosure is used to support confidentiality claims for non-CAP submissions.

Please address any further correspondence with the Agency related to this TSCA 8(e) submission to:

Document Processing Center (7407)
Attn: TSCA Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Washington, D.C. 20460-0001

EPA looks forward to continued cooperation with your organization in its ongoing efforts to evaluate and manage potential risks posed by chemicals to health and the environment.

Sincerely,

Terry R. O'Bryan

Terry R. O'Bryan
Risk Analysis Branch

Enclosure

12574A

Triage of 8(e) Submissions

Date sent to triage: 12/14/95 **NON-CAP** **CAP**

Submission number: 12574A TSCA Inventory: Y N D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX (SB)TOX SEN w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX CTOX EPI RTOX GTOX

STOX/ONCO CTOX/ONCO IMMUNO CYTO NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

For Contractor Use Only

entire document: (0) 1 2 **pages** 1 **pages** 1, 2, tabs

Notes:

Contractor reviewer : UPS **Date:** 4/14/95

CECATS\TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA:
Submission # 8EHQ- 0992-12574 SEQ. A

TYPE: (INT) SUPP FLWP

SUBMITTER NAME: Phillips Petroleum Company

SUB. DATE: 08/24/92 OTS DATE: 09/02/92 CSRAD DATE: 03/07/95

INFORMATION REQUESTED: FLWP DATE:
0501 NO INFO REQUESTED
0502 INFO REQUESTED (TECH)
0503 INFO REQUESTED (VOL ACTIONS)
0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:
(0639) REFER TO CHEMICAL SCREENING
(0678) CAP NOTICE

VOLUNTARY ACTIONS:
(0401) NO ACTION REPORTED
0402 STUDIES PLANNED/UNDERWAY
0403 NOTIFICATION OF WORKERS/OTHERS
0404 LABEL/MSDS CHANGES
0405 PROCESS/HANDLING CHANGES
0406 APP./USE DISCONTINUED
0407 PRODUCTION DISCONTINUED
0408 CONFIDENTIAL

CHEMICAL NAME: [redacted]

CAS#: 68553-00-4

INFORMATION TYPE:		P F C
0201	ONCO (HUMAN)	01 02 04
0202	ONCO (ANIMAL)	01 02 04
0203	CELL TRANS (IN VITRO)	01 02 04
0204	MUTA (IN VITRO)	01 02 04
0205	MUTA (IN VIVO)	01 02 04
0206	REPRO/TERATO (HUMAN)	01 02 04
0207	REPRO/TERATO (ANIMAL)	01 02 04
0208	NEURO (HUMAN)	01 02 04
0209	NEURO (ANIMAL)	01 02 04
0210	ACUTE TOX. (HUMAN)	01 02 04
0211	CHR. TOX. (HUMAN)	01 02 04
0212	ACUTE TOX. (ANIMAL)	01 02 04
(0213)	SUB ACUTE TOX (ANIMAL)	01 02 04
0214	SUB CHRONIC TOX (ANIMAL)	01 02 04
0215	CHRONIC TOX (ANIMAL)	01 02 04

INFORMATION TYPE:		P F C
0216	EPI/CLIN	01 02 04
0217	HUMAN EXPOS (PROD CONTAM)	01 02 04
0218	HUMAN EXPOS (ACCIDENTAL)	01 02 04
0219	HUMAN EXPOS (MONITORING)	01 02 04
0220	ECO/AQUA TOX	01 02 04
0221	ENV. OCCC/REL/FATE	01 02 04
0222	EMER INCI OF ENV CONTAM	01 02 04
0223	RESPONSE REQEST DELAY	01 02 04
0224	PROD/COMP/CHEM ID	01 02 04
0225	REPORTING RATIONALE	01 02 04
0226	CONFIDENTIAL	01 02 04
0227	ALLERG (HUMAN)	01 02 04
0228	ALLERG (ANIMAL)	01 02 04
0239	METAB/PHARMACO (ANIMAL)	01 02 04
0240	METAB/PHARMACO (HUMAN)	01 02 04

INFORMATION TYPE:		P F C
0241	IMMUNO (ANIMAL)	01 02 04
0242	IMMUNO (HUMAN)	01 02 04
(0243)	CHEM/PHYS PROP	01 02 04
0244	CLASTO (IN VITRO)	01 02 04
0245	CLASTO (ANIMAL)	01 02 04
0246	CLASTO (HUMAN)	01 02 04
0247	DNA DAM/REPAIR	01 02 04
0248	PROD/USE/PROC	01 02 04
0251	MSDS	01 02 04
0299	OTHER	01 02 04

TRIAGE DATA:

NON-CBI INVENTORY: (YES) NO IN TERMINI

ONGOING REVIEW: YES (DROP/REFER) NO (CONTINUE) REJ-R

SPECIES: RBT

TOXICOLOGICAL CONCERN: (LOW) MED HIGH

USE:

PRODUCTION:

CAS SR

COMMENTS

12574A

L

Subacute dermal toxicity in the rabbit is of low concern. New Zealand white rabbits (4/sex/dose) received occluded applications of 0 or 8,000 mg/kg (conversion based on application of 8 mL/kg assuming a density of 1) for five days, followed by a 2-day rest period, then a second 5-day application. Three of the 8 animals died during the test. The application site exhibited erythema and slight edema. At necropsy, histopathological changes were seen in the liver (multifocal necrosis in 5/8), intestines (inflammation in 1/8), and stomach (ulceration in 1/8). Severe skin lesions (acanthosis, pyoderma, hyperkeratosis) were also seen in all treated animals.